Project No. 1251-100

Crude Oil Tank Farms Project, Agrood Area 30 (Module-1)

PETROJET Enppi EGPC

System ID	**030-EL-015**
System Description	**Plant Area Lightning Protection System**

Sr.	Pre-Commissioning and Commissioning Dossier Index	Applicable (Yes/No)
1	**Mechanical Completion Certificate (MCC)**	
2	**Ready for Startup Certificate (RFSU)**	
3	**System Punch Lists**	
4	**System Limits Marked Up P&ID**	
5	**System Index**	
6	**Piping Pre-Commissioning**	
	6.01) Piping Test Packs	
	6.02) Piping Pre-commissioning Check Lists	
7	**Piping Commissioning**	
	7.01) Service Test, GLT, CLT and N2 Purging Certificates	
	7.02) Piping Commissioning Check Lists	

Sr.	Pre-Commissioning and Commissioning Dossier Index	Applicable (Yes/No)
8	**Mechanical Pre-Commissioning**	
	8.01) System Mechanical Index	
	8.02) Equipment Drawings	
	8.03) Equipment Datasheets	
	8.04) Boxing-up Certificates	

	8.05) Grouting Certificates	
	8.06) Pre-Alignment Certificates	
	8.07) Mechanical Pre-Commissioning Checklists	
9	**Mechanical Commissioning**	
	9.01) Final Alignment Certificates	
	9.02) Motor Solo Run Certificates	
	9.03) Mechanical Run Test (MRT) Certificates	
	9.04) Mechanical Commissioning Checklists	
	9.05) Mechanical Supplier Check Lists & Reports	
10	**Instrumentation Pre-Commissioning**	
	10.01) System Instrument Index	
	10.02) Instrument Data Sheets	
	10.03) Instrument Cable Schedule	
	10.04) System Instrumentation Wiring Diagram	
	10.05) Hook-up Drawing (Mechanical & Pneumatic)	
	10.06) Instruments Cables Schedule	
	10.07) Instruments Cables Laying Certificates	
	10.08) Instruments Cables Termination Certificates	
	10.09) Instruments Cables Testing Certificates	
	10.10) Instruments Calibration Certificates	
	10.11) Instrument Loop Checks Certificates	
	10.12) Instrumentation Pre-Commissioning Check Lists	
	10.13) Instrumentation Supplier Check Lists & Reports	
11	**Instrumentation Commissioning**	
	11.01) Instrumentation Function Test Certificates	
	11.02) Instrumentation Supplier Check Lists & Reports	
Sr.	**Pre-Commissioning and Commissioning Dossier Index**	**Applicable (Yes/No)**
12	**Electrical Pre-Commissioning**	
	12.01) System Electrical Index	
	12.02) Electrical Drawings	
	12.03) Motor Datasheets	
	12.04) Electrical Cables Schedule	
	12.05) Electrical Cables Laying Certificates	
	12.06) Electrical Cables Testing Certificates	
	12.07) Electrical Cables Termination Certificates	
	12.08) FAT Reports & Certificates	
	12.09) SAT Reports & Certificates	
	12.10) Electrical Pre-Commissioning Check Lists	
	12.11) Electrical Supplier Check Lists & Reports	

13	**Electrical Commissioning**	
	13.01) Electrical -Commissioning Check Lists	
	13.02) Electrical Supplier Check Lists & Reports	
14	**Red Marked-up Drawings**	
	14.01) P&ID	
	14.02) Instrumentation Drawings	
	14.03) Electrical Drawings	

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

1-Mechanical Completion Certificate (MCC)

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SYSTEM MECHANICAL COMPLETION CERTIFICATE (MCC)

PROJECT TITLE	:	CRUDE OIL TANK FARM PROJECT (AGROOD AREA)
PROJECT No	:	01251-100
SYSTEM NAME	:	Plant Area Lighting Protection System
SYSTEM ID	:	030-EL-015

THIS IS TO CERTIFY THAT:

- **THE ABOVE SYSTEM HAS BEEN FABRICATED, ERECTED, INSTALLED AND TESTED TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS, SPECIFICATIONS, THE APPLICABLE CODES AND STANDARDS.**
- **ALL PRE-COMMISSIONING RELEVANT ACTIVITIES, TESTS, INSPECTIONS AND CHECKS HAVE BEEN CARRIED OUT FOR THIS SYSTEM AND FOUND ACCEPTABLE.**
- **Q/C DOCUMENTATION OF THE ABOVE SYSTEM HAS BEEN AUDITED BY THE CUSTOMER SITE QUALITY CONTROL AND FOUND COMPLETED.**
- **ALL PUNCH LIST ITEMS CATEGORY (A) IN THIS SUBSYSTEM WERE CLEARED.**
- **THIS SYTEM IS MECHANICALLY COMPLETED ON THE DATE AND READY FOR COMMISSIONING (RFC) WITH THE FOLLOWING EXCEPTIONS.**

EXCEPTIONS :

COMPANY	PETROJET	ENPPI	PMC
NAME	Sabry Seleem	Mohamed Abbal'	Mohamed Ibrahim
TITLE	Qc ESI engineer	Construction Site Mgr	
SIGNATURE			
DATE	3/10/2021		

Enppi

SYSTEM MECHANICAL COMPLETION CERTIFICATE (MCC)

PROJECT TITLE	:	CRUDE OIL TANK FARM(AGROOD AREA
PROJECT No	:	1251-100
SYSTEM NAME	:	Plant Area Lightning Protection System (Partial for tank 03)
SYSTEM ID	:	030-EL-015

THIS IS TO CERTIFY THAT:

- **THE ABOVE SYSTEM HAS BEEN FABRICATED, ERECTED, INSTALLED AND TESTED TO THE REQUIREMENTS OF THE CONTRACT DRAWINGS, SPECIFICATIONS, THE APPLICABLE CODES AND STANDARDS.**
- **ALL PRE-COMMISSIONING RELEVANT ACTIVITIES, TESTS, INSPECTIONS AND CHECKS HAVE BEEN CARRIED OUT FOR THIS SYSTEM AND FOUND ACCEPTABLE.**
- **Q/C DOCUMENTATION OF THE ABOVE SYSTEM HAS BEEN AUDITED BY THE CUSTOMER SITE QUALITY CONTROL AND FOUND COMPLETED.**
- **ALL PUNCH LIST ITEMS CATEGORY (A) IN THIS SUBSYSTEM WERE CLEARED.**
- **THIS SYTEM IS MECHANICALLY COMPLETED ON THE DATE AND READY FOR COMMISSIONING (RFC) WITH THE FOLLOWING EXCEPTIONS.**

EXCEPTIONS :

Partial for Tank 3 Only

NOTE: ACCEPTANCE OF THE ABOVE SYSTEM DOES NOT RELIEVE ENPPI/CONSTRUCTION CONTRACTOR FROM THEIR CONTRACTUAL OBLIGATIONS AND RESPONSIBILITIES.

COMPANY	PETROJET	ENPPI	PPC
NAME	Sobhy Sedkem		
TITLE	E&I QC Engineer		
SIGNATURE			
DATE			

10000-000-KM2-FRM-0002 (10/13)

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

2- Ready for Startup Certificate (RFSU)

Enppi

READY FOR START UP CERTIFICATE

PROJECT TITLE	:	EGPC CRUDE OIL TANK FARMS PROJECT (AGROOD-30)
PROJECT No.	:	1251-100
SYSTEM /AREA /PLANT	:	Plant Area Lightning Protection System
SYSTEM /AREA /PLANT No.	:	030-EL-015

THIS IS TO CERTIFY THAT:

- THE MENTIONED SYSTEM /AREA /PLANT IS READY FOR START UP WHERE ALL MECHANICAL WORKS, PRECOMMISSIONING AND COMMISSIONING ACTIVITIES HAVE BEEN SUCCESSFULLY COMPLETED.
- MECHANICAL COMPLETION CERTIFICATE(S) FOR THE MENTIONED SYSTEM / AREA / PLANT HAVE BEEN SIGNED.
- ISSUANCE OF THIS READY FOR START UP CERTIFICATE(S) SHALL NOT RELIEVE CONTRACTOR(S) FROM THEIR OBLIGATIONS TO COMPLETE THE REMAINING SYSTEMS NOR FROM THEIR WARRANTY OBLIGATIONS AND OTHER PROVISIONS OF THE CONTRACT.
- THE FOLLOWING EXCEPTIONS AGREED TO BE CLEARED AFTER START UP AND WILL NOT PREVENT START UP ACTIVITIES.

EXCEPTIONS :

COMPANY	ENPPI	PPC
NAME	Ahmed El Shafe	Mohamed Ibrahim
TITLE	Commissioning Manager	Elec. manager
SIGNATURE	Shafe	
DATE	10.10.21	

10000-000-EK8-FRM-0006 (03/15)

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

3- System Punch Lists

PETROJET بتروجت | Enppi | **PUNCH LIST** | EGPC

PROJECT TITLE : CRUDE OIL TANK FARM PROJECT (AGROOD AREA)

PROJECT NUMBER : 01251-100	**DISCIPLINE: Electrical**
SYSTEM NAME: Plant Area Lightning Protection System	**SYSTEM ID:** 030-EL-015
SUB-SYSTEM NAME:	**SUB-SYSTEM ID:**

NO	DESCRIPTION	CAT	ACTION BY	DISP	CLEARANCE APPROVED BY	
	No Punch					

CAT: CATEGORY(A,B,C) ,ACTION BY: (ENPPI,CONST.CONTRACTOR,SUPPLIER.....) , DISP: DESCIPLINE(PIP,MECH,ELECT,INST.....)

COMPANY	PTJ	ENPPI	PMC
NAME			
SIGN.			
DATE			

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

4- System Limits Marked Up P&ID

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

5- System Index

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

6- Piping Pre-Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

6.01- Piping Test Packs

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

6.02- Piping Pre-commissioning Check Lists

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

7- Piping Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

7.01- Service Test, GLT, CLT and N2 Purging Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

7.02- Piping Commissioning Check Lists

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8- Mechanical pre-Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8.01- System Mechanical Index

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8.02- Equipment Drawings

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8.03- Equipment Datasheets

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8.04- Boxing-up Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8.05- Grouting Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8.06- Pre-Alignment Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

8.07- Mechanical Pre-Commissioning Checklists

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

9- Mechanical Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

9.01- Final Alignment Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

9.02- Motor Solo Run Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

9.03- Mechanical Run Test (MRT) Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

9.04- Mechanical Commissioning Checklists

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

9.05- Mechanical Supplier Check Lists & Reports

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10- Instrumentation Pre-Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.01- System Instrument Index

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.02- Instrument Data Sheets

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.03- Instrument Cable Schedule

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.04- System Instrumentation Wiring Diagram

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.05- Hook-up Drawing (Mechanical & Pneumatic)

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.06- Instruments Cables Schedule

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.07- Instruments Cables Laying Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.08- Instruments Cables Termination Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.09- Instruments Cables Testing Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.10- Instruments Calibration Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.11- Instrument Loop Checks Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.12- Instrumentation Pre-Commissioning Check Lists

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

10.13- Instrumentation Supplier Check Lists & Reports

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

11- Instrumentation Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

11.01) Instrumentation Function Test Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

11.02- Instrumentation Supplier Check Lists & Reports

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12- Electrical Pre-Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.01- System Electrical Index

030-EL-015	Plant Area Lightning Protection System	Electrical	Lightning	Lightning	Checklist	EL-37 A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-01	Early Streamer Emissions		N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-02	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-03	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-04	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-05	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-06	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-07	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-08	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-09	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-10	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-11	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-12	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-13	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-14	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-15	Early Streamer Emissions	N/A	N/A
030-EL-015	Plant Area Lightning Protection System	Electrical	030-ESE-16	Early Streamer Emissions	N/A	N/A

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.02- Electrical Drawings

REFERENCE DRAWINGS AND DOCUMENTS

LEGEND

NOTES

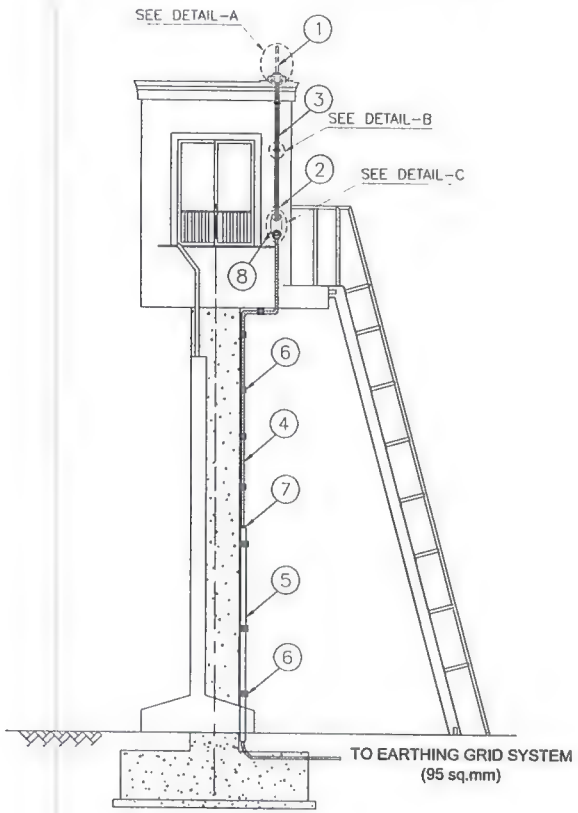
KEY PLAN

EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
EGPC

EGPC CRUDE OIL TANK FARM
AGROOD AREA (MODULE-1)
LIGHTNING PROTECTION LAYOUT

Enppi

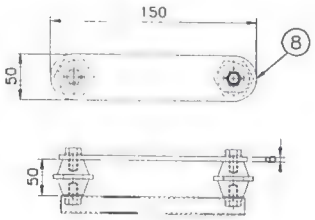
SCALE	DRAWING NO.	REVISION
1:1000	01251-100-030-ENL-001 01/01	3



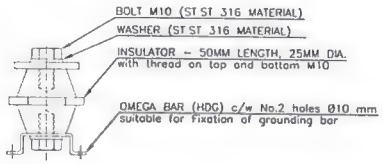
BILL OF MATERIAL

ITEM No.	QTY.	UNITS	DESCRIPTION	MATERIALS	SUPPLIED BY
1	1	EA	LIGHTNING AIR TERMINAL ROD (16MM DIA. 0.6 METER LENGTH) (TYPE ATC 124M). COMPLETE WITH BASE PLATE (TYPE ASGL16M)	COPPER ALLOY	BUILDING BULK SUPPLIER
2	AR	EA	METALLIC DC CLIP WITH FIXATION ACCESSORIES. (TYPE DCG313)	COPPER ALLOY	BUILDING BULK SUPPLIER
3	AR	MT	TINNED COPPER TAPE 31x3mm (TYPE TT313)	TINNED COPPER	BUILDING BULK SUPPLIER
4	AR	MT	95mm² EARTHING CONDUCTOR	COPPER/PVC INSULATED	CABLES SUPPLIER
5	AR	MT	1" CONDUIT	HEAVY DUTY PVC	CONSTRUCTION CONTRACTOR
6	AR	EA	CONDUIT/CABLE CLAMP WITH FIXATION ACCESSORIES	HDG STEEL	CONSTRUCTION CONTRACTOR
7	AR	–	SEALING FOAM	OIL RESISTANT PUTTY	CONSTRUCTION CONTRACTOR
8	1	EA	TINNED COPPER DISCONNECTING LINK BAR 150x50x6mm	TINNED COPPER	EARTHING SUPPLIER

NOTES:
1. ALL DIMENSIONS ARE IN mm.
2. ALL FIXATION ACCESSORIES SUCH AS BOLT, NUT, FLAT WASHER & LOCK WASHER ARE STAINLESS STEEL-316L.

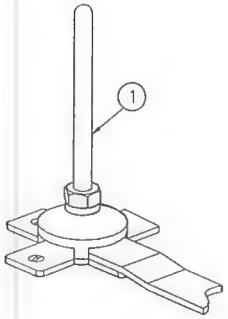


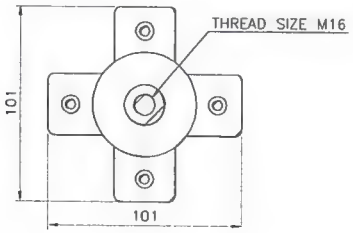
DISCONNECTING LINK



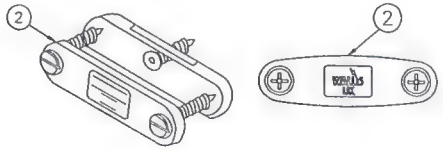
INSULATORS WITH ACCESSORIES

DETAIL–C





DETAIL–A



DETAIL–B

EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
العيئة العامة المصرية للبترول
EGPC

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لاجـل العيئة العامة المصرية للبترول

AT : EGYPT الموقع : مصر

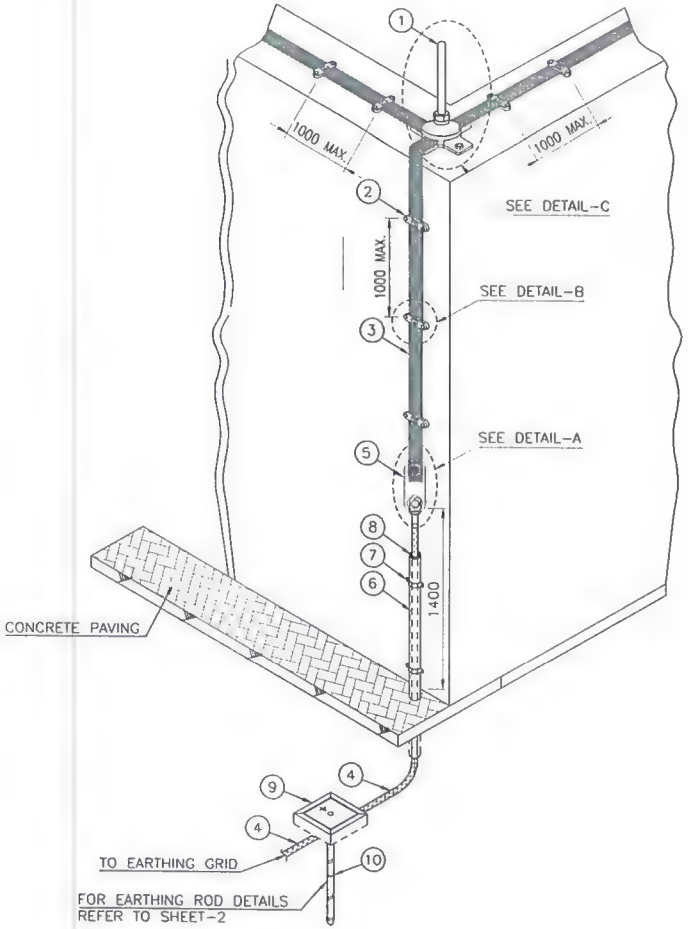
EGPC CRUDE OIL TANK FARM

ELECTRICAL INSTALLATION DETAILS
EARTHING AND LIGHTNING PROTECTION SYSTEM
LIGHTNING PROTECTION SYSTEM FOR GUARD TOWER

التركي الهندسي للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	DOCUMENT NUMBER	SHEET	REVISION
NONE	01251-100-000-EID-003	29/29	1

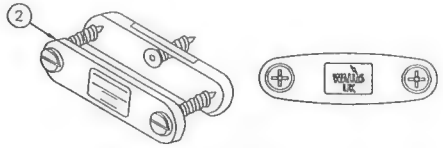
A3 SIZE: 297 X 42



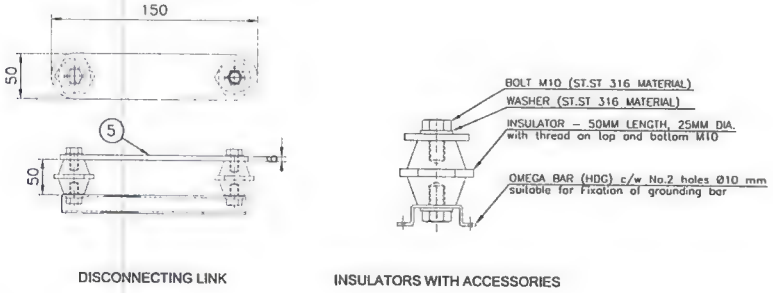
BILL OF MATERIAL

ITEM No.	QTY.	UNITS	DESCRIPTION	MATERIALS	SUPPLIED BY
1	1	EA	LIGHTNING AIR TERMINAL ROD (16MM DIA, 0.6 METER LENGTH) (TYPE ATC 124M), COMPLETE WITH BASE PLATE (TYPE ASGL16M)	COPPER ALLOY	BUILDING BULK SUPPLIER
2	AR	EA	METALLIC DC CLIP WITH FIXATION ACCESSORIES, (TYPE DCG313)	COPPER ALLOY	BUILDING BULK SUPPLIER
3	AR	MT	TINNED COPPER TAPE 31x3mm (TYPE TT313)	TINNED COPPER	BUILDING BULK SUPPLIER
4	AR	MT	95mm² EARTHING CONDUCTOR	COPPER/PVC INSULATED	CABLES SUPPLIER
5	1	EA	TINNED COPPER DISCONNECTING LINK BAR 150x50x6mm	TINNED COPPER	EARTHING SUPPLIER
6	AR	MT	1" CONDUIT	HEAVY DUTY PVC	CONSTRUCTION CONTRACTOR
7	AR	EA	CONDUIT CLAMP WITH FIXATION ACCESSORIES	HDG STEEL	CONSTRUCTION CONTRACTOR
8	AR	–	SEALING FOAM	OIL RESISTANT PUTTY	CONSTRUCTION CONTRACTOR
9	1	EA	CONCRETE PIT 400x400mm, 400mm LENGTH WITH PLUG & LIFTING SLOT	CONCRETE	CONSTRUCTION CONTRACTOR
10	1	SET	EARTH ROD (FOR DETAIL REFER TO SHEET-2)	COPPER CLAD STEEL	EARTHING SUPPLIER

NOTES:
1. ALL DIMENSIONS ARE IN mm.
2. ALL FIXATION ACCESSORIES SUCH AS BOLT, NUT, FLAT WASHER & LOCK WASHER ARE STAINLESS STEEL-316L.



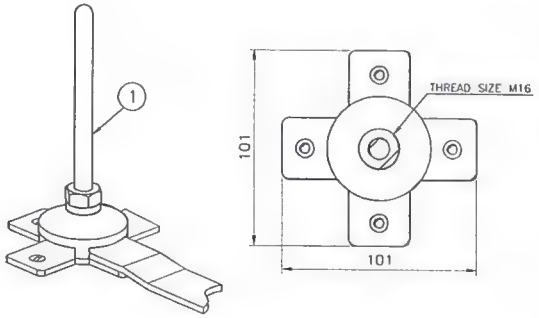
DETAIL-B



DISCONNECTING LINK

INSULATORS WITH ACCESSORIES

DETAIL-A



DETAIL-C

EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
EGPC
الهيئة العامة المصرية للبترول

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لحساب الهيئة العامة المصرية للبترول

AT : EGYPT الموقع : مصر

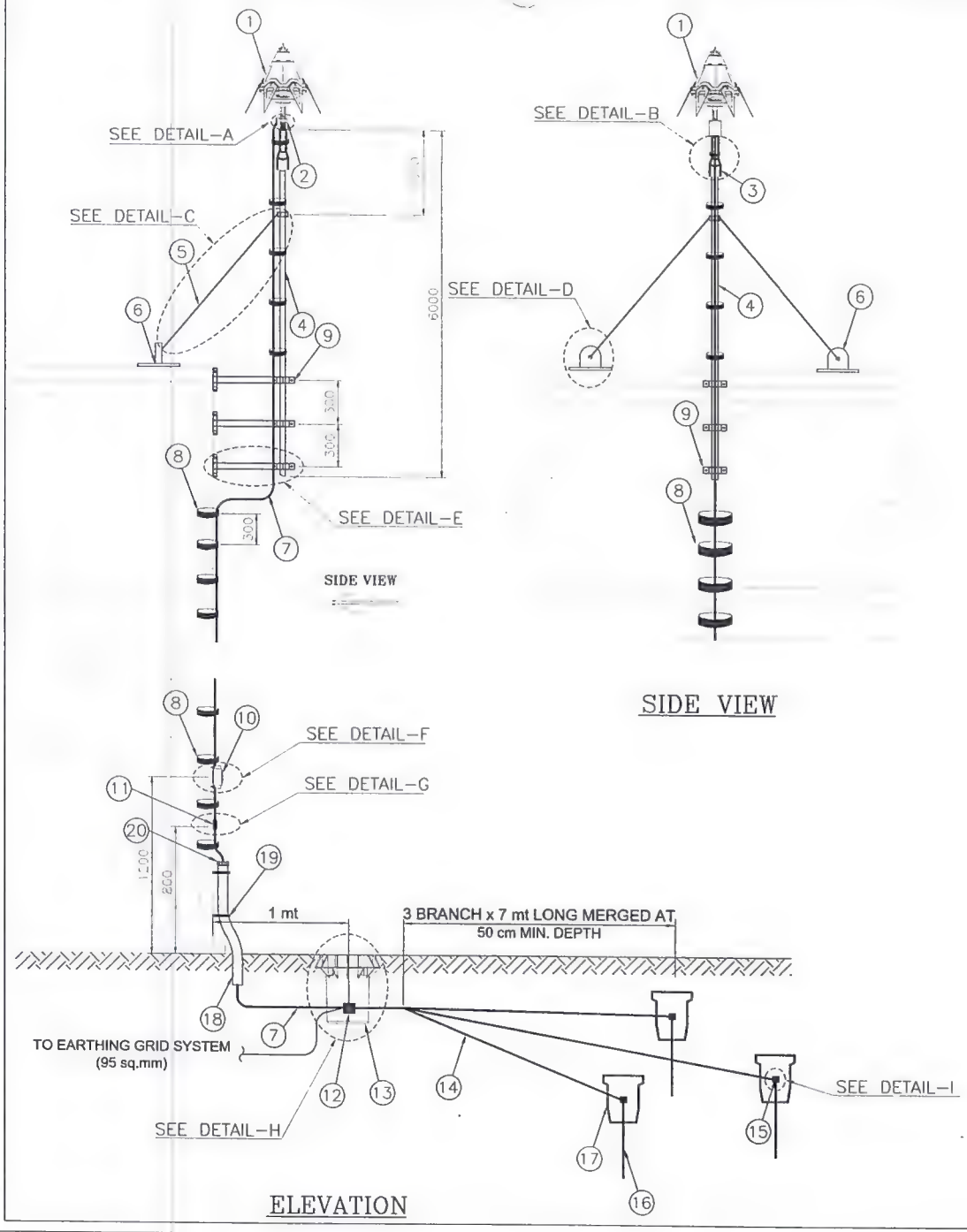
EGPC CRUDE OIL TANK FARM

ELECTRICAL INSTALLATION DETAILS
EARTHING AND LIGHTNING PROTECTION SYSTEM
LIGHTNING PROTECTION SYSTEM FOR GATE HOUSE

الشركة الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	DOCUMENT NUMBER	SHEET	REVISION
NONE	01251-100-000-EID-003	28/29	1

A3 SIZE: 297 X 4



BILL OF MATERIAL

ITEM No.	QTY.	UNITS	DESCRIPTION	MATERIALS	SUPPLIED BY
1	1	EA	E.S.E AIR TERMINAL (PREVECTRON TYPE) WITH REMOTE TESTING MODULE	STAINLESS STEEL	EARTHING SUPPLIER
2	1	EA	E.S.E TO FLAT DOWN CONDUCTOR CLAMP	STAINLESS STEEL	EARTHING SUPPLIER
3	1	EA	ADAPTOR FOR E.S.E TO ELEVATION POLE CONNECTION	HDG STEEL	EARTHING SUPPLIER
4	1	EA	ELEVATION POLE 6 METERS HEIGHT	STAINLESS STEEL	EARTHING SUPPLIER
5	2	SET	GUY WIRE KIT	HDG STEEL	EARTHING SUPPLIER
6	2	EA	BRACKET FOR GUY WIRE FIXATION	HDG STEEL	EARTHING SUPPLIER
7	SEE NOTE-1	MT	FLAT TYPE CONDUCTOR SIZE 27x2 mm	TINNED COPPER	EARTHING SUPPLIER
8	SEE NOTE-2	EA	CLAMPING COLLAR FOR FLAT TYPE CONDUCTOR MODEL NO. (KT6U078-0500)	STAINLESS STEEL	EARTHING SUPPLIER
9	3	EA	BRACKET FOR ELEVATION POLE FIXATION	HDG STEEL	EARTHING SUPPLIER
10	1	EA	DIGITAL FLASH LIGHTING COUNTER MODEL NO. (8011)	---	EARTHING SUPPLIER
11	1	EA	TEST CLAMP MODEL NO. (P7001F)	BRASS	EARTHING SUPPLIER
12	1	EA	CLAMP FOR FLAT TO ROUND CONDUCTOR MODEL NO. (P6092)	BRASS	EARTHING SUPPLIER
13	1	EA	INSPECTION HOUSING MODEL NO. (P7052)	PLASTIC	EARTHING SUPPLIER
14	1	EA	CROW FOOT WITH 7 METER BRANCH LENGTH MODEL NO. (P7021)	TINNED COPPER	EARTHING SUPPLIER
15	3	EA	CLAMP FOR FLAT CONDUCTOR TO EARTH ROD CONNECTION MODEL NO. (P7039)	COPPER CLAD	EARTHING SUPPLIER
16	3	EA	EARTH ROD (3/4" DIA, 3 METER LENGTH) COMPOSED OF TO SECTIONS EACH 1.5 METER, FURSE TYPE RB310	COPPER CLAD	EARTHING SUPPLIER
17	3	EA	CONCRETE PIT 400X400mm, 450mm LENGTH WITH COVER & LIFTING SLOT	CONCRETE	CONSTRUCTION CONTRACTOR
18	AR	EA	PROTECTION CONDUIT	UPVC	CONSTRUCTION CONTRACTOR
19	AR	EA	2" CONDUIT CLAMP	HDG STEEL	CONSTRUCTION CONTRACTOR
20	AR	EA	SEALING FOAM	OIL RESISTANT PUTTY	CONSTRUCTION CONTRACTOR

NOTES:
1. LENGTH TO BE DEFINED DURING THE ERECTION.
2. QUANTITY TO BE DEFINED DURING THE ERECTION CONSIDERING THAT TYPICAL SPACING IS 300mm.

EGPC
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EGPC
الهيئة العامة المصرية للبترول

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) — جـ الهيئة العامة المصرية للبترول

AT : EGYPT — الموقع : مصر

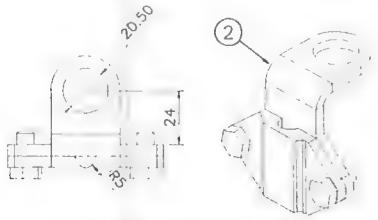
EGPC CRUDE OIL TANK FARM

ELECTRICAL INSTALLATION DETAILS
EARTHING AND LIGHTNING PROTECTION SYSTEM
STRUCTURE MOUNTED E.S.E AIR TERMINAL

الشركة الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

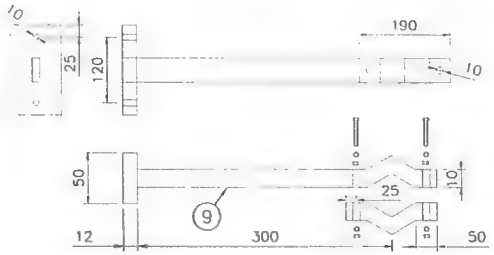
SCALE	DOCUMENT NUMBER	SHEET	REVISI
NONE	01251-100-000-EID-003	20/29	0

A3 SIZE: 297 x

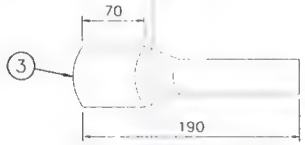


ESE TO FLAT CONDUCTOR CLAMP

DETAIL–A

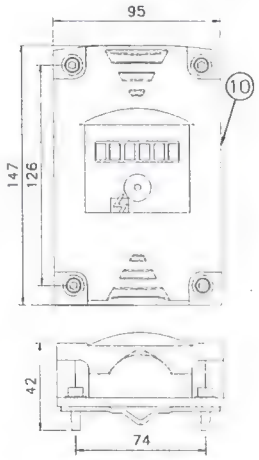


DETAIL–E



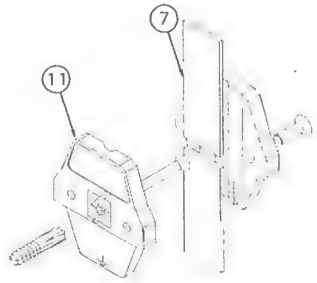
1.5" TO M20 ADAPTOR

DETAIL–B



DIGITAL FLASH LIGHTENING COUNTER

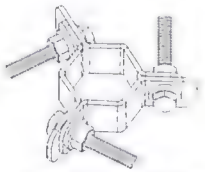
DETAIL–F



TEST CLAMP

DETAIL–G

GALVANIZED STEEL WIRE 8mm

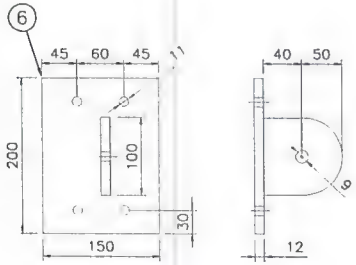


WIRE ROPE TO ROD CLAMP

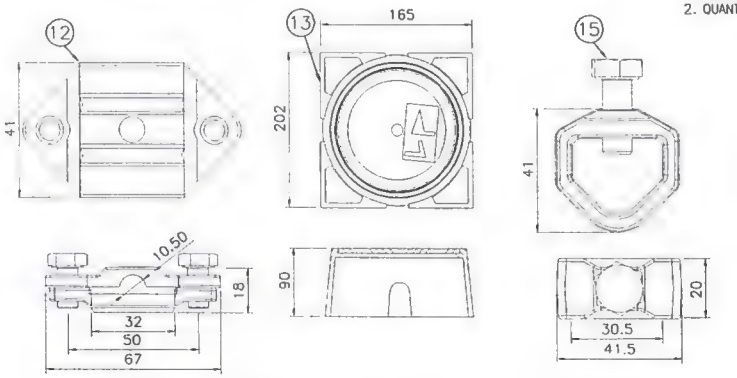
TURNBUCKLE

WIRE ROPE CLIP

DETAIL–C



DETAIL–D



FLAT CONDUCTOR TO ROUND CONDUCTOR CLAMP WITH INSPECTION PIT

DETAIL–H

ROD TO FLAT CONDUCTOR CLAMP

DETAIL–I

BILL OF MATERIAL

ITEM No.	QTY	UNITS	DESCRIPTION	MATERIALS	SUPPLIED BY
1	1	EA	E.S.E AIR TERMINAL (PREVECTRON TYPE) WITH REMOTE TESTING MODULE	STAINLESS STEEL	EARTHING SUPPLIER
2	1	EA	E.S.E TO FLAT DOWN CONDUCTOR CLAMP	STAINLESS STEEL	EARTHING SUPPLIER
3	1	EA	ADAPTOR FOR E.S.E TO ELEVATION POLE CONNECTION	HDG STEEL	EARTHING SUPPLIER
4	1	EA	ELEVATION POLE 6 METERS HEIGHT	STAINLESS STEEL	EARTHING SUPPLIER
5	2	SET	GUY WIRE KIT	HDG STEEL	EARTHING SUPPLIER
6	2	EA	BRACKET FOR GUY WIRE FIXATION	HDG STEEL	EARTHING SUPPLIER
7	SEE NOTE-1	MT	FLAT TYPE CONDUCTOR SIZE 27x2 mm	TINNED COPPER	EARTHING SUPPLIER
8	SEE NOTE-2	EA	CLAMPING COLLAR FOR FLAT TYPE CONDUCTOR MODEL NO. (KT6U078–0500)	STAINLESS STEEL	EARTHING SUPPLIER
9	3	EA	BRACKET FOR ELEVATION POLE FIXATION	HDG STEEL	EARTHING SUPPLIER
10	1	EA	DIGITAL FLASH LIGHTING COUNTER MODEL NO. (8011)	---	EARTHING SUPPLIER
11	1	EA	TEST CLAMP MODEL NO. (P7001F)	BRASS	EARTHING SUPPLIER
12	1	EA	CLAMP FOR FLAT TO ROUND CONDUCTOR MODEL NO. (P6092)	BRASS	EARTHING SUPPLIER
13	1	EA	INSPECTION HOUSING MODEL NO. (P7052)	PLASTIC	EARTHING SUPPLIER
14	1	EA	CROW FOOT WITH 7 METER BRANCH LENGTH MODEL NO. (P7021)	TINNED COPPER	EARTHING SUPPLIER
15	3	EA	CLAMP FOR FLAT CONDUCTOR TO EARTH ROD CONNECTION MODEL NO. (P7039)	COPPER CLAD	EARTHING SUPPLIER
16	3	EA	EARTH ROD (3/4" DIA, 3 METER LENGTH) COMPOSED OF TO SECTIONS EACH 1.5 METER, FURSE TYPE RB310	COPPER CLAD	EARTHING SUPPLIER
17	3	EA	CONCRETE PIT 400X400mm, 450mm LENGTH WITH COVER & LIFTING SLOT	CONCRETE	CONSTRUCTION CONTRACTOR
18	AR	EA	PROTECTION CONDUIT	UPVC	CONSTRUCTION CONTRACTOR
19	AR	EA	2" CONDUIT CLAMP	HDG STEEL	CONSTRUCTION CONTRACTOR
20	AR	EA	SEALING FOAM	OIL RESISTANT PUTTY	CONSTRUCTION CONTRACTOR

NOTES:
1. LENGTH TO BE DEFINED DURING THE ERECTION.
2. QUANTITY TO BE DEFINED DURING THE ERECTION CONSIDERING THAT TYPICAL SPACING IS 300mm.

EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
EGPC
العيئة العامة المصرية للبترول

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) لاجل العيئة العامة المصرية للبترول

AT : EGYPT الموقع : مصر

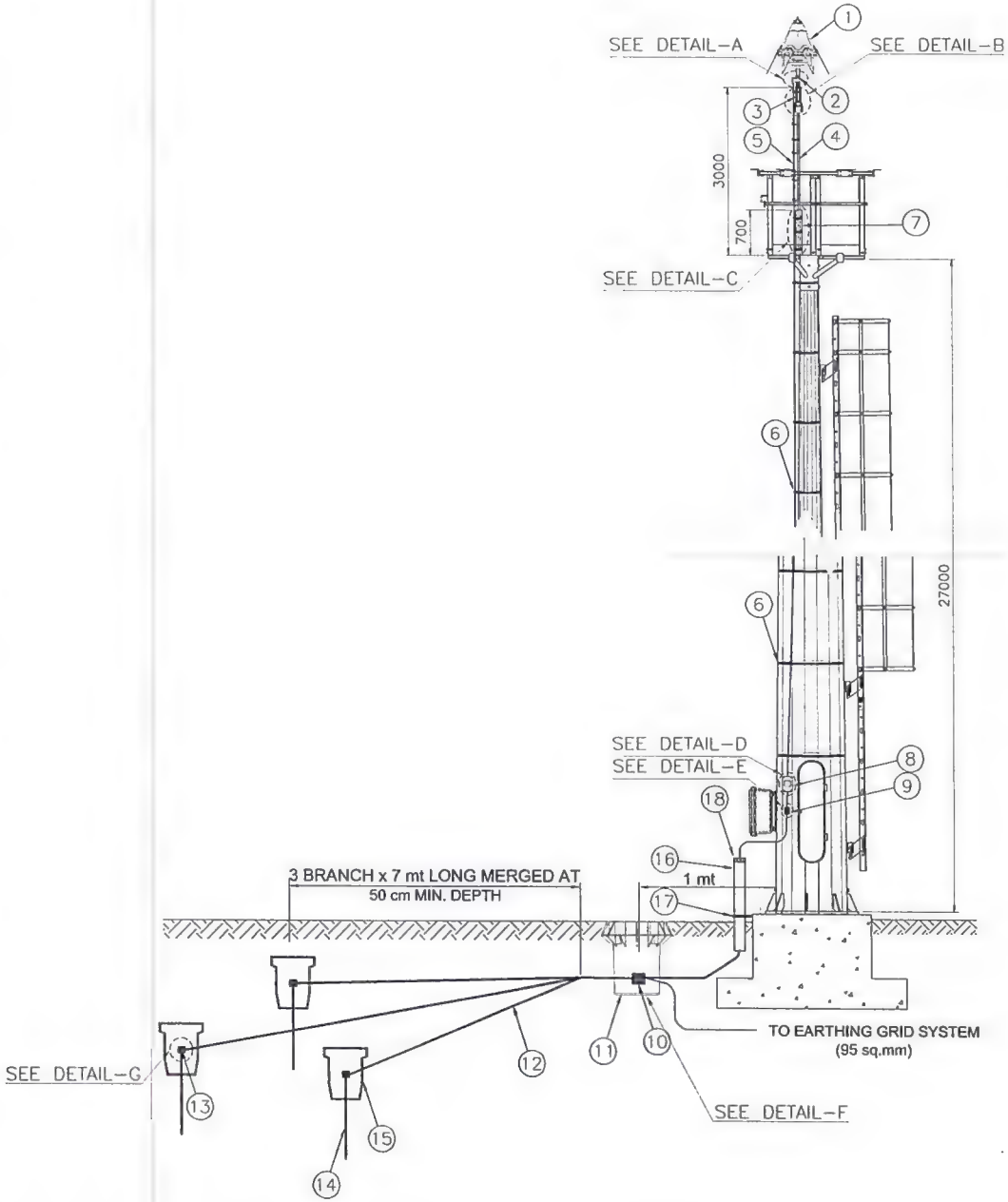
EGPC CRUDE OIL TANK FARM

ELECTRICAL INSTALLATION DETAILS
EARTHING AND LIGHTNING PROTECTION SYSTEM
STRUCTURE MOUNTED E.S.E AIR TERMINAL DETAILS

الشركة الهندسية للصناعات البترولية والكيماوية
Enppi إنبي
ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	DOCUMENT NUMBER	SHEET	REVISION
NONE	01251–100–000–EID–003	21/29	0

A3 SIZE: 297 X 420



BILL OF MATERIAL

ITEM No.	QTY.	UNITS	DESCRIPTION	MATERIALS	SUPPLIED BY
1	1	EA	E.S.E AIR TERMINAL (PREVECTRON TYPE) WITH REMOTE TESTING MODULE	STAINLESS STEEL	EARTHING SUPPLIER
2	1	EA	E.S.E TO FLAT DOWN CONDUCTOR CLAMP	STAINLESS STEEL	EARTHING SUPPLIER
3	1	EA	ADAPTOR FOR E.S.E TO ELEVATION POLE CONNECTION	HDG STEEL	EARTHING SUPPLIER
4	1	EA	ELEVATION POLE 3 METERS HEIGHT	STAINLESS STEEL	EARTHING SUPPLIER
5	SEE NOTE-1	MT	FLAT TYPE CONDUCTOR SIZE 27x2 mm	TINNED COPPER	EARTHING SUPPLIER
6	SEE NOTE-2	EA	CLAMPING COLLAR FOR FLAT TYPE CONDUCTOR MODEL NO. (KT6U078-0500)	STAINLESS STEEL	EARTHING SUPPLIER
7	1	EA	BASE FOR ELEVATED POLE FIXATION	HDG STEEL	LIGHTING SUPPLIER
8	1	EA	DIGITAL FLASH LIGHTING COUNTER MODEL NO. (8011)	---	EARTHING SUPPLIER
9	1	EA	TEST CLAMP MODEL NO. (P7001F)	BRASS	EARTHING SUPPLIER
10	1	EA	CLAMP FOR FLAT TO ROUND CONDUCTOR MODEL NO. (P6092)	BRASS	EARTHING SUPPLIER
11	1	EA	INSPECTION HOUSING MODEL NO. (P7052)	PLASTIC	EARTHING SUPPLIER
12	1	EA	CROW FOOT WITH 7 METER BRANCH LENGTH MODEL NO. (P7021)	TINNED COPPER	EARTHING SUPPLIER
13	3	EA	CLAMP FOR FLAT CONDUCTOR TO EARTH ROD CONNECTION MODEL NO. (P7039)	COPPER CLAD	EARTHING SUPPLIER
14	3	EA	EARTH ROD (3/4" DIA, 3 METER LENGTH) COMPOSED OF TO SECTIONS EACH 1.5 METER, FURSE TYPE RB310	COPPER CLAD	EARTHING SUPPLIER
15	3	EA	CONCRETE PIT 400X400mm, 450mm LENGTH WITH COVER & LIFTING SLOT	CONCRETE	CONSTRUCTION CONTRACTOR
16	AR	EA	PROTECTION CONDUIT	UPVC	CONSTRUCTION CONTRACTOR
17	AR	EA	2" CONDUIT CLAMP	HDG STEEL	CONSTRUCTION CONTRACTOR
18	AR	EA	SEALING FOAM	OIL RESISTANT PUTTY	CONSTRUCTION CONTRACTOR

NOTES:
1. LENGTH TO BE DEFINED DURING THE ERECTION.
2. QUANTITY TO BE DEFINED DURING THE ERECTION CONSIDERING THAT TYPICAL SPACING IS 300mm.

EGPC
THE EGYPTIAN GENERAL PETROLEUM CO.
EGPC
الهيئة العامة المصرية للبترول

FOR : THE EGYPTIAN GENERAL PETROLEUM CORPORATION (EGPC) — جـ الهيئة العامة المصرية للبترول

AT : EGYPT — الموقع : مصر

EGPC CRUDE OIL TANK FARM

ELECTRICAL INSTALLATION DETAILS

EARTHING AND LIGHTNING PROTECTION SYSTEM

E.S.E AIR TERMINAL MOUNTED ON 27M HIGH MAST LIGHTING TOWE

1

الشركة الهندسية للصناعات البترولية والكيماوية

Enppi إنبي

ENGINEERING FOR THE PETROLEUM AND PROCESS INDUSTRIES

SCALE	DOCUMENT NUMBER	SHEET	REVISI
NONE	01251-100-000-EID-003	24/29	1

A3 SIZE: 297 X

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.03- Motor Datasheets

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.04- Electrical Cables Schedule

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.05- Electrical Cables Laying Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.06- Electrical Cables Testing Certificates

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

Owner :	Egyptian General Petroleum Corporation (EGPC)	Project No: 01251-100-030 :01251-100-031
Contractor	CONSORTIUM (ENPPI / PETROJET)	Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : EARTHING SYSTEM INSTALLATION FOR PLANT AREA

NOTIFICATION NO. : PTJ-ELE-RFI-173 DISCIPLINE : ELECTRICAL

DATE : : 4/18/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	LIGHTNING SYSTEM INSTALLATION FOR Tank 03	MODULE 1	18-Apr-21				

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME			
SIGNATURE			
DATE			

Enppi

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

EARTHING SYSTEM INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI-173		ITR-EL-0010	ELECTRICAL	1 OF 1

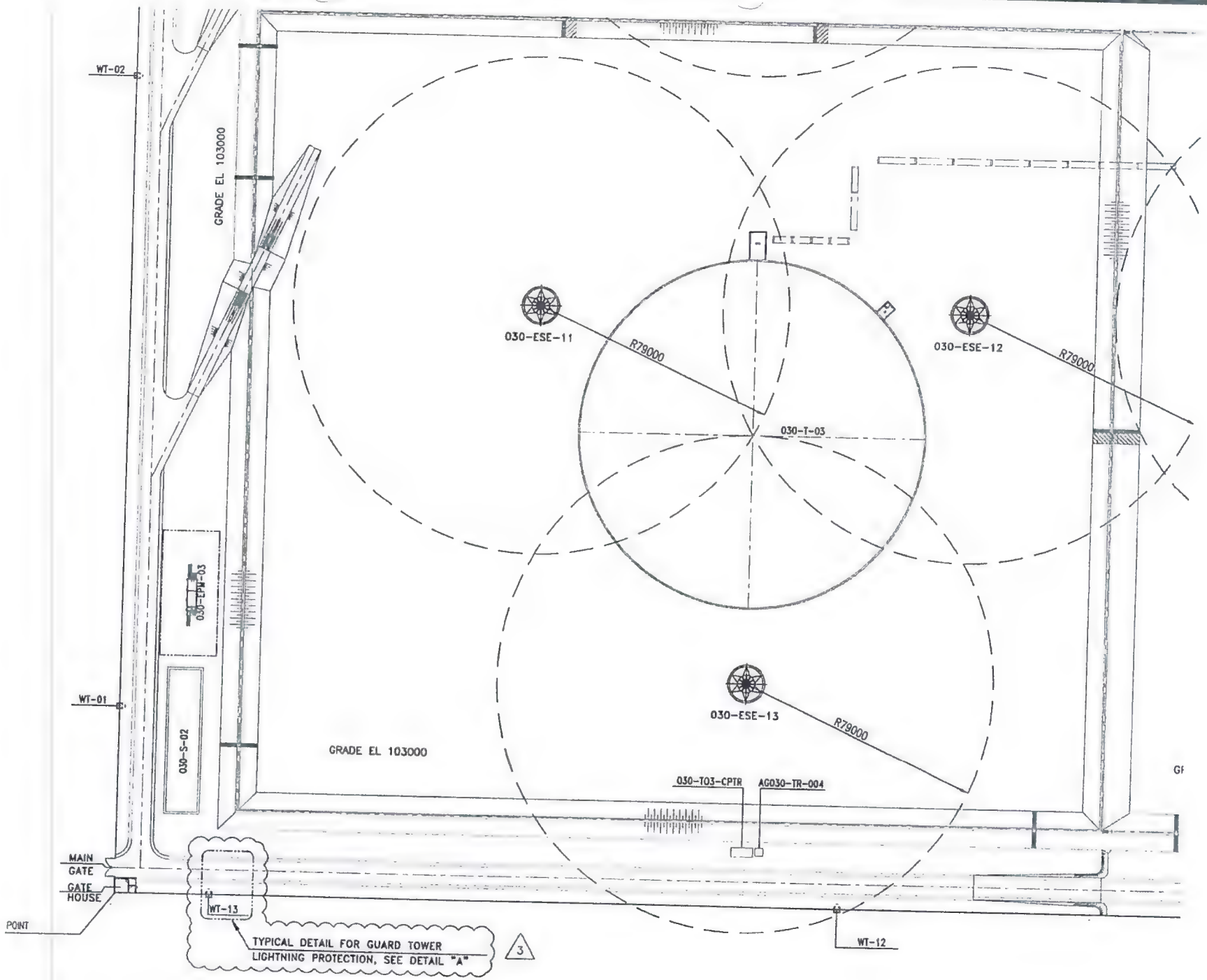
JOB DESCRIPTION	AREA DESCRIPTION
PLANTAREA EARTHING SYSTEM INSTALLATION	MODULE 2

NO.	Area to be inspected	RESULT		
		ACCEPT	REJECT	N/A.
1	Check Cable Type / Size as per Drawing			✓
2	Check earthing grid route excavation depth & width			✓
3	Cable Location, Route & Laying			✓
4	Check tightness of all connection, and Lugs securely bolted in place			✓
5	Conductors rising from ground are protected by conduit or sleeve			✓
6	Installation of Earthing Rod (location/type/size)	✓		✓
7	Installation of Lightning Rod & Arrestor (location/type/size)	✓		
8	Protection of Earthing cable & overall earthing accessory	✓		

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME			
SIGNATURE			
DATE			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GRADE EL 103000
030-ESE-11
R79000
030-ESE-12
R79000
030-T-03
030-EPW-03
WT-01
030-S-02
030-ESE-13
R79000
GRADE EL 103000
030-T03-CPTR
AG030-TR-004
MAIN
GATE
GATE
HOUSE
POINT
WT-13
TYPICAL DETAIL FOR GUARD TOWER
LIGHTNING PROTECTION, SEE DETAIL "A"
3
WT-12

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030
:01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : EARTHING SYSTEM INSTALLATION FOR PLANT AREA

NOTIFICATION NO. : PTJ-ELE-RFI-175 DISCIPLINE : ELECTRICAL

DATE : : 4/23/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	LIGHTNING SYSTEM INSTALLATION FOR Tank 04	MODULE 1	23-Apr-21				

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE	A.A.	® Islam Sherif	M. Omar
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

SPECTION AND TEST REPORT FOR

EARTHING SYSTEM INSTALLATION

SPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
TJ-ELE-RFI-		ITR-EL-0010	ELECTRICAL	1 OF 1

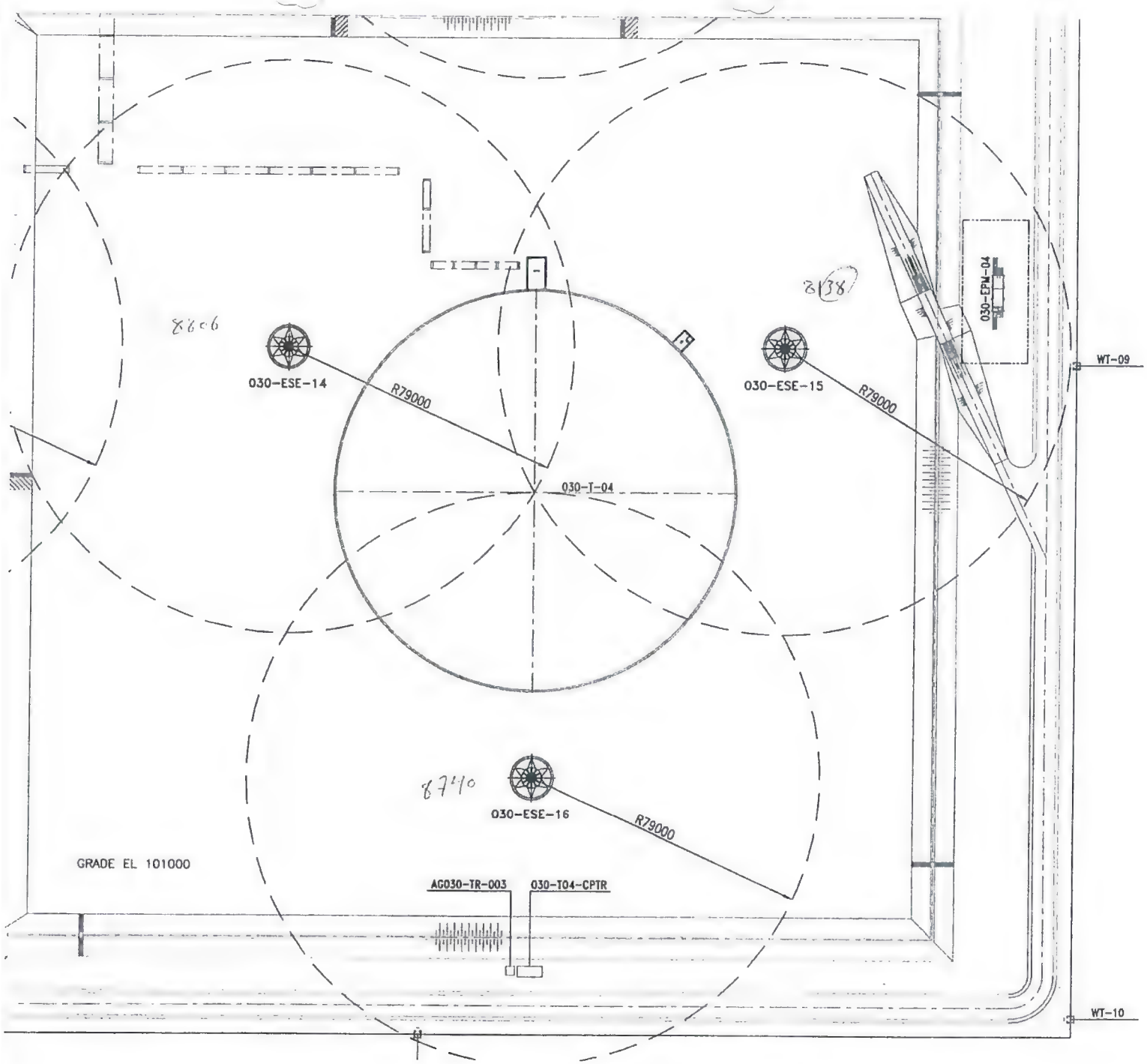
›B DESCRIPTION	AREA DESCRIPTION
PLANTAREA EARTHING SYSTEM INSTALLATION	MODULE 2

NO.	Area to be inspected	RESULT		
		ACCEPT	REJECT	N/A.
1	Check Cable Type / Size as per Drawing			✓
2	Check earthing grid route excavation depth & width			✓
3	Cable Location, Route & Laying			✓
4	Check tightness of all connection, and Lugs securely bolted in place			✓
5	Conductors rising from ground are protected by conduit or sleeve			✓
6	Installation of Earthing Rod (location/type/size)			✓
7	Installation of Lightning Rod & Arrestor (location/type/size)	✓		
8	Protection of Earthing cable & overall earthing accessory	✓		

EMARKS:

EFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE			M. Omar
DATE			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R79000
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030-T-04
030-EPN-04
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WT-10
GRADE EL 101000
AG030-TR-003
030-T04-CPTR
8806
8138
8740

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)	Project No: 01251-100-030 :01251-100-031
Contractor CONSORTIUM (ENPPI / PETROJET)	Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : LIGHTININING SYSTEM INSTALLATION FOR PLANT AREA

NOTIFICATION NO. : PTJ-ELE-RFI- 234 DISCIPLINE : ELECTRICAL

DATE : : 7/2/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	LIGHTNING SYSTEM INSTALLATION FOR Tank 02	MODULE 1	2-Jul-21				

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		® Islam Sherif	
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

INSPECTION AND TEST REPORT FOR

EARTHING SYSTEM INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI-202		ITR-EL-0010	ELECTRICAL	1 OF 1

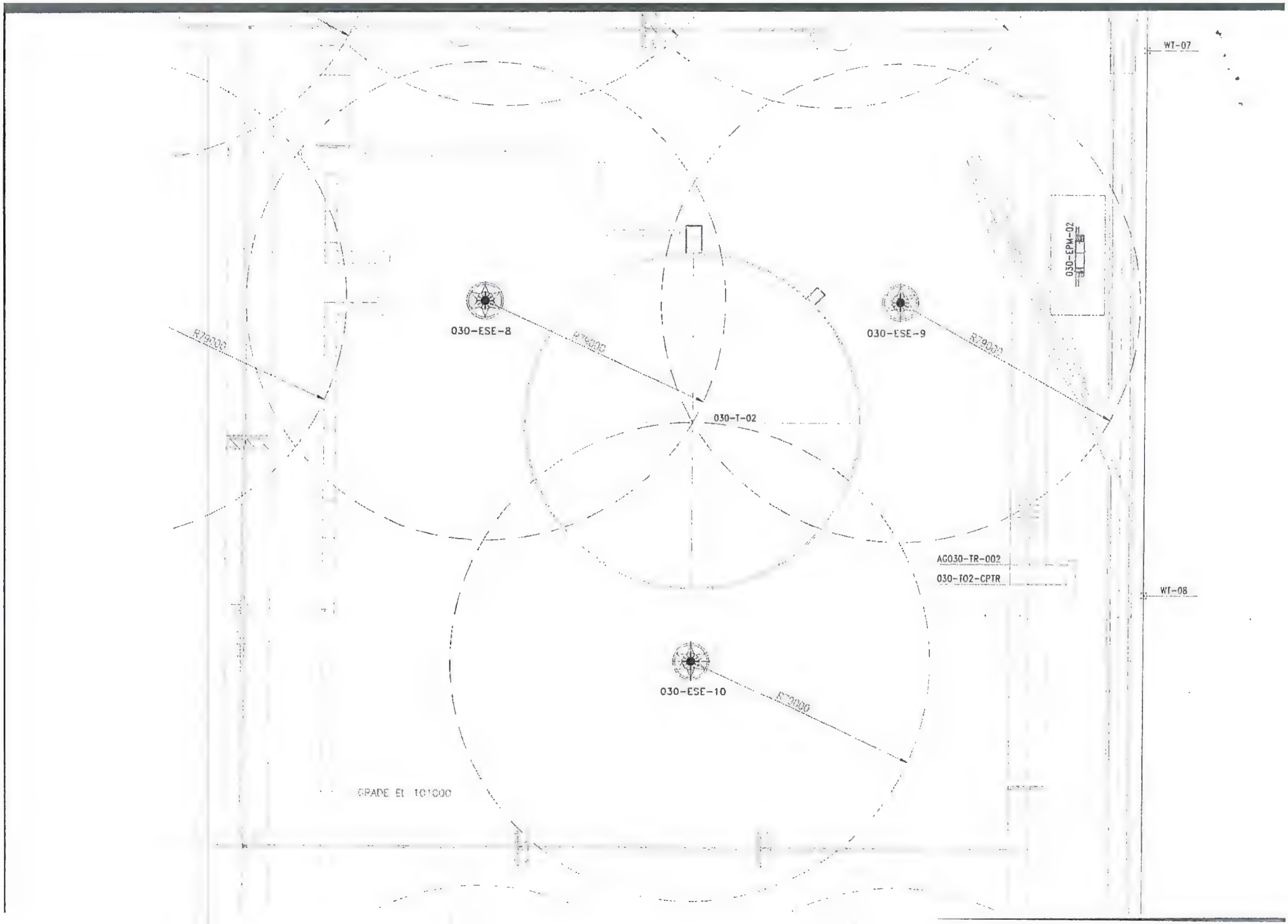
JOB DESCRIPTION	AREA DESCRIPTION
PLANTAREA EARTHING SYSTEM INSTALLATION	MODULE 2

NO.	Area to be inspected	RESULT		
		ACCEPT	REJECT	N/A.
1	Check Cable Type / Size as per Drawing			✓
2	Check earthing grid route excavation depth & width			✓
3	Cable Location, Route & Laying			✓
4	Check tightness of all connection, and Lugs securely bolted in place			✓
5	Conductors rising from ground are protected by conduit or sleeve			✓
6	Installation of Earthing Rod (location/type/size)			✓
7	Installation of Lightning Rod & Arrestor (location/type/size)	✓		
8	Protection of Earthing cable & overall earthing accessory	✓		

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :		Islam Sherif	
SIGNATURE			
DATE			


WT-07
030-EPM-02
030-ESE-8
030-ESE-9
030-T-02
AG030-TR-002
030-T02-CPTR
WT-08
030-ESE-10
GRADE EL 101000

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

Owner : Egyptian General Petroleum Corporation (EGPC)

Project No: 01251-100-030 :01251-100-031

Contractor CONSORTIUM (ENPPI / PETROJET)

Document No: ITR-QC-0001
Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : EARTHING SYSTEM INSTALLATION FOR PLANT AREA

NOTIFICATION NO. : PTJ-ELE-RFI- 245 DISCIPLINE : ELECTRICAL

DATE : : 7/31/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	EARTHING SYSTEM INSTALLATION AND LIGHTINING FOR TANK 01	MODULE 1	31-Jul-21				
	AS PER ATTACHED DRAWING						

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		® Islam Sherif	
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

INSPECTION AND TEST REPORT FOR

EARTHING SYSTEM INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI- 245		ITR-EL-0010	ELECTRICAL	1 OF 1

JOB DESCRIPTION	AREA DESCRIPTION
PLANTAREA EARTHING SYSTEM INSTALLATION	MODULE 2

NO.	Area to be inspected	RESULT		
		ACCEPT	REJECT	N/A.
1	Check Cable Type / Size as per Drawing	✓		
2	Check earthing grid route excavation depth & width	✓		
3	Cable Location, Route & Laying	✓		
4	Check tightness of all connection, and Lugs securely bolted in place	✓		
5	Conductors rising from ground are protected by conduit or sleeve	✓		
6	Installation of Earthing Rod (location/type/size)	✓		
7	Installation of Lightning Rod & Arrestor (location/type/size)	✓		
8	Protection of Earthing cable & overall earthing accessory	✓		

REMARKS:

FERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		Islam Sherif	
DATE			

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

INSPECTION AND TEST REPORT FOR

EARTHING RESISTANCE TEST

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI-~~189~~245		ITR-EL-0011	ELECTRICAL	1 OF 1

JOB DESCRIPTION	AREA DESCRIPTION
PLANTAREA EARTHING SYSTEM INSTALLATION	MODULE2

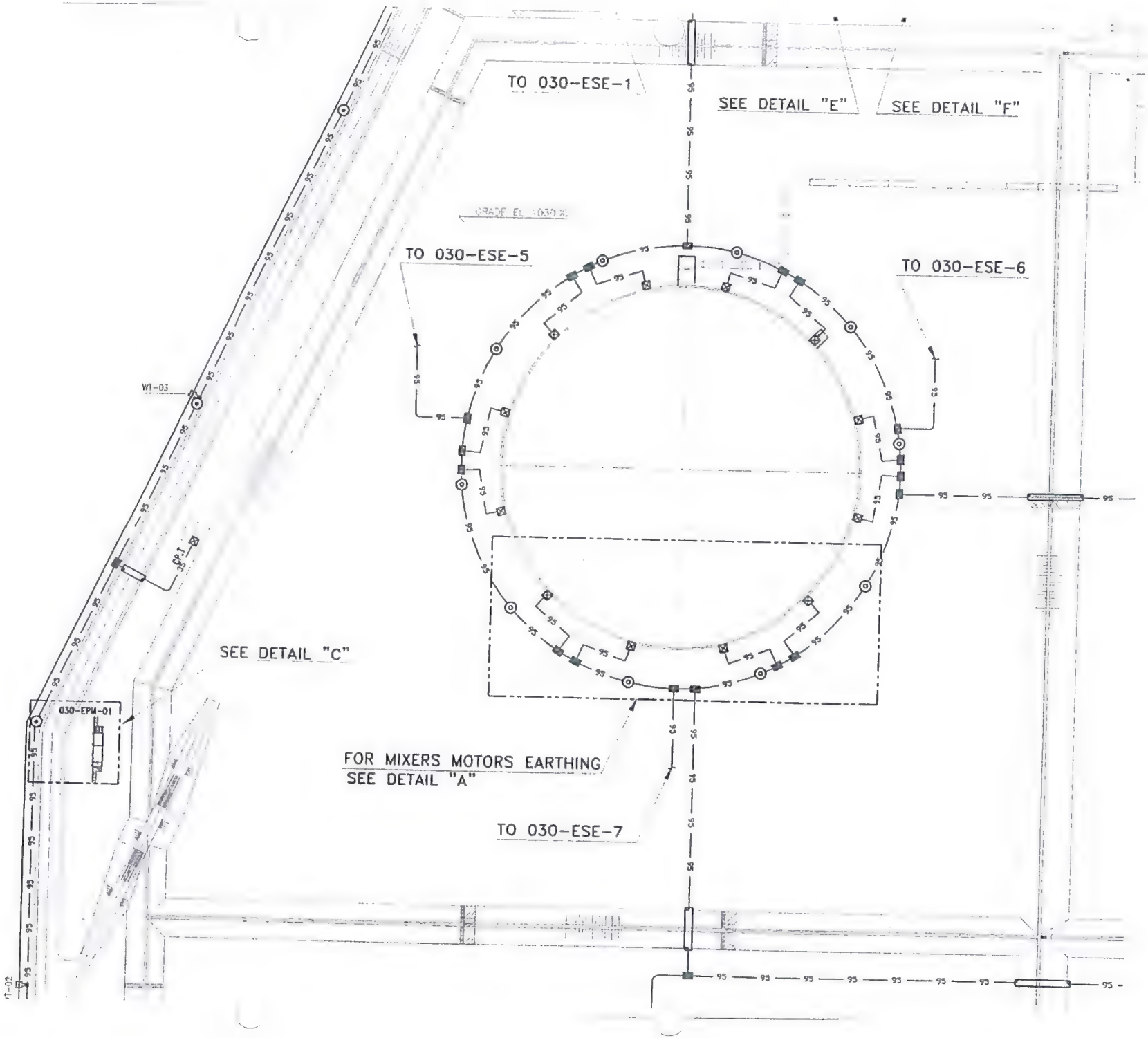
INSTRUMENT TYPE:	SERIAL:	Calibration Date

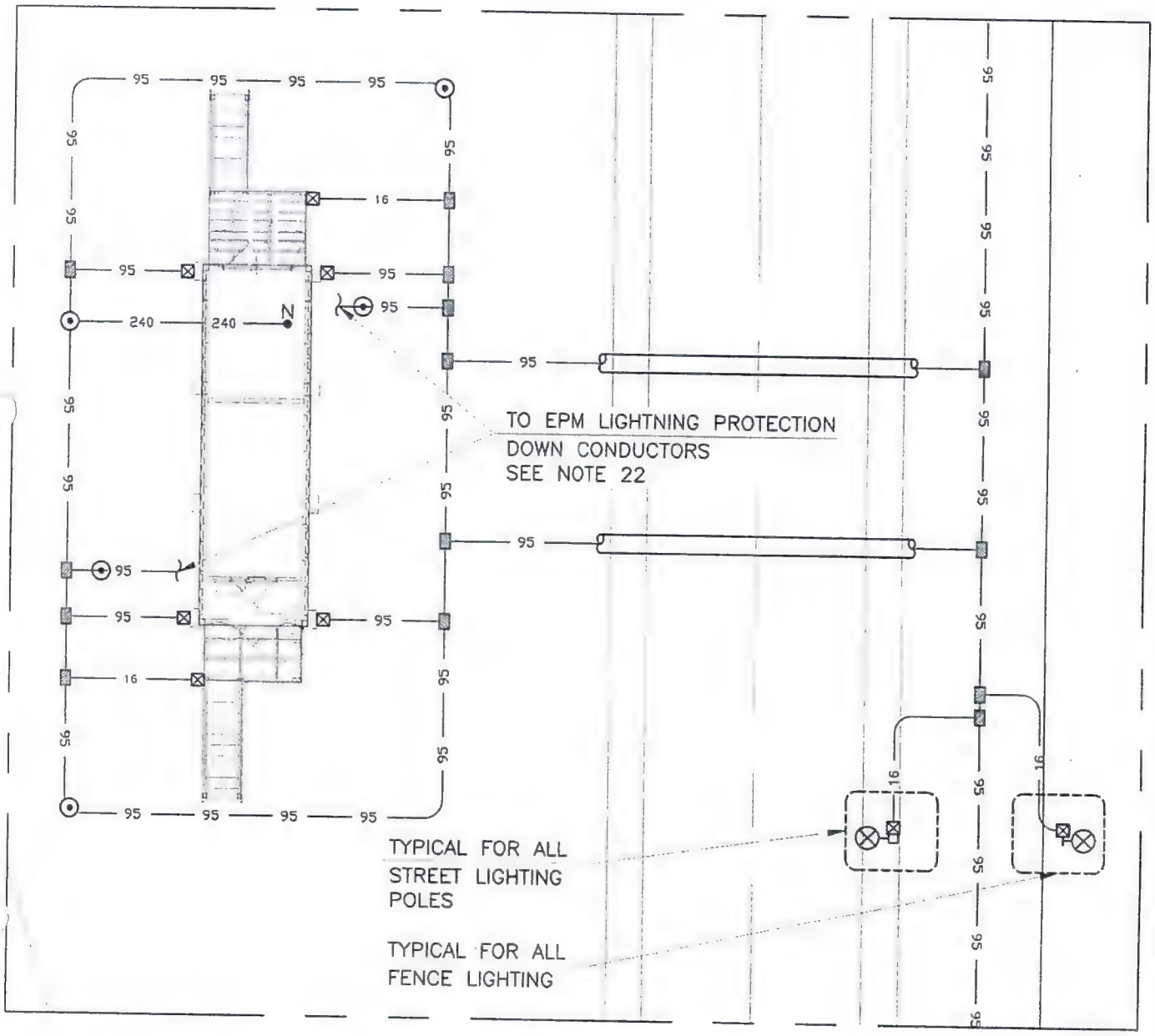
NO.	LOCATION	Tag NO	EARTHING RESISTANCE (OHM)	RESULT		
				ACCEPT	REJECT	N/A.
1	As Per Attached		.01L Ω	✓		
2	As Per attached		0.85 Ω	✓		
3	As Per attached		.012 Ω	✓		
4	As Per attached		.95 Ω	✓		
5	As Per attached		1.05 Ω	✓		

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		® Islam Sherif	
DATE			


TO 030-ESE-1
SEE DETAIL "E"
SEE DETAIL "F"
GRADE EL. 030.0
TO 030-ESE-5
TO 030-ESE-6
W1-03
SEE DETAIL "C"
030-EPM-01
FOR MIXERS MOTORS EARTHING
SEE DETAIL "A"
TO 030-ESE-7



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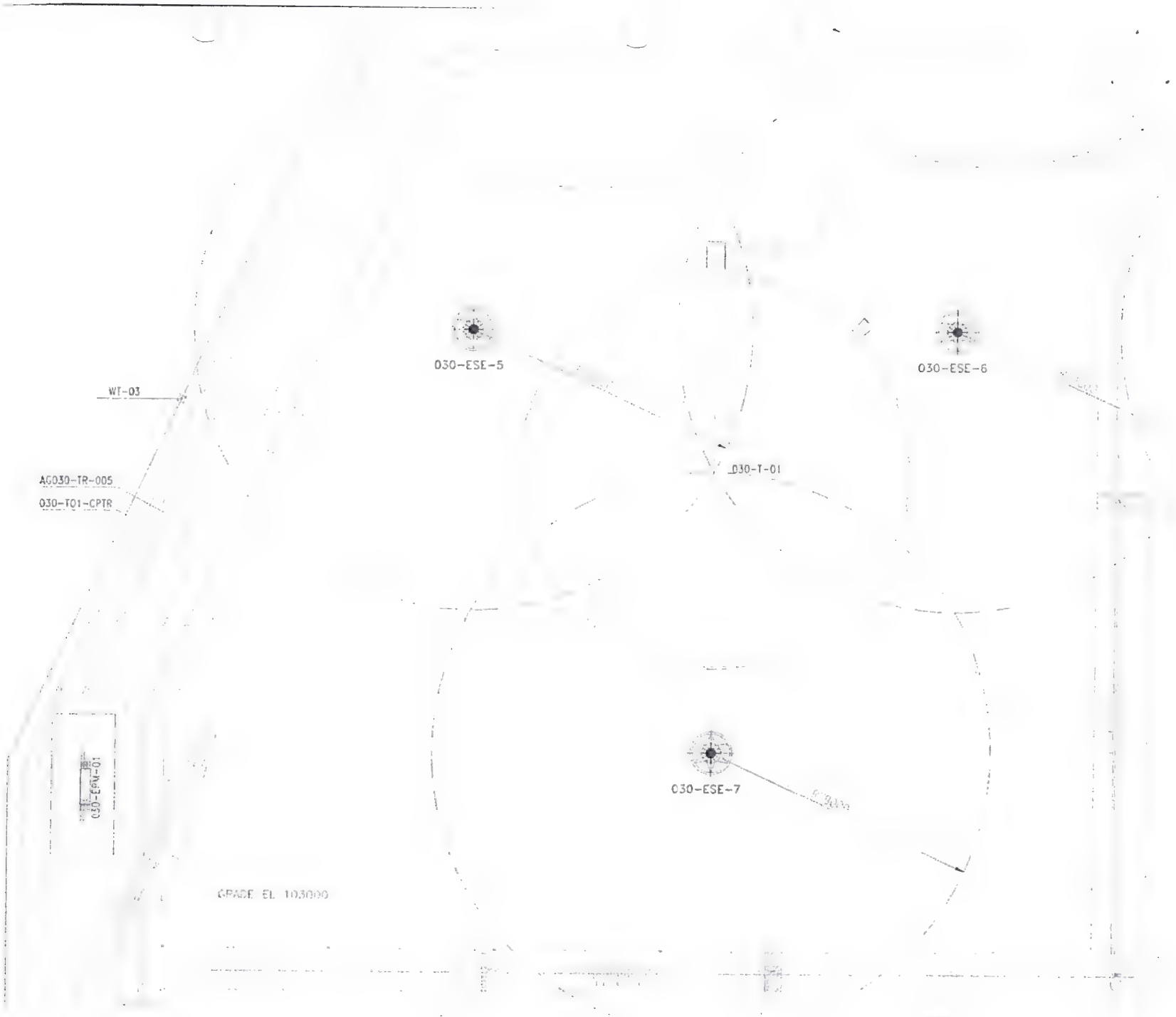
030-ESE-5
030-ESE-6
WT-03
AG030-TR-005
030-T01-CPTR
030-T-01
030-ESE-7
030-EGM-01
GRADE EL 103000

Enppi PETROJET

EGPC CRUDE OIL TANK FARM

EGPC

Owner :	Egyptian General Petroleum Corporation (EGPC)	Project No: 01251-100-030 :01251-100-031
Contractor	CONSORTIUM (ENPPI / PETROJET)	Document No: ITR-QC-0001 Revision No. : 00

REQUEST FOR INSPECTION

ACTIVITY : LIGHTINING SYSTEM INSTALLATION FOR PLANT AREA

NOTIFICATION NO. : PTJ-ELE-RFI- 237 DISCIPLINE : ELECTRICAL

DATE : : 7/15/2021

NO.	DESCRIPTION	LOCATION	DATE / TIME	INSPECTION			REMARKS
				PETROJET	ENPPI	PMC	
	LIGHTINING SYSTEM INSTALLATION FOR BOOSTER AREA AND FIRE AND UTILITY AREA	MODULE 2	15-Jul-21				

NOTE:

Inspection result : A - Approved B - Reject C - Approved with Comment

	PETROJET	ENPPI	PMC
NAME :		® Islam Sherif	
SIGNATURE			
DATE			

Enppi PETROJET	EGPC CRUDE OIL TANK FARM	EGPC

INSPECTION AND TEST REPORT FOR

EARTHING SYSTEM INSTALLATION

INSPECTION REPORT NUMBER	INSPECTION DATE & TIME	ITR NUMBER	DISPLINE	SHEET NO
PTJ-ELE-RFI-~~202~~ 238		ITR-EL-0010	ELECTRICAL	1 OF 1

JOB DESCRIPTION	AREA DESCRIPTION
PLANTAREA EARTHING SYSTEM INSTALLATION	MODULE 2

NO.	Area to be inspected	RESULT		
		ACCEPT	REJECT	N/A.
1	Check Cable Type / Size as per Drawing			✓
2	Check earthing grid route excavation depth & width			✓
3	Cable Location, Route & Laying			✓
4	Check tightness of all connection, and Lugs securely bolted in place			✓
5	Conductors rising from ground are protected by conduit or sleeve			✓
6	Installation of Earthing Rod (location/type/size)			✓
7	Installation of Lightning Rod & Arrestor (location/type/size)	✓		
8	Protection of Earthing cable & overall earthing accessory			✓

REMARKS:

REFERENCE DOCUMENTS:

	PETROJET	ENPPI	PMC
NAME :			
SIGNATURE		islam Sherif	
DATE			

WT-06
030-S-01
030-ESE-
030-P-06D
030-P-06C
030-P-06A
030-P-02
030-P-01B
030-P-01A
030-ESE-3
030-V-01
030-P-03A/B
WT-05
PTR
-10

[redacted]

030-SH-01

030-V-0

030-P-15C
030-T-11C

[redacted]

030-P-15B
030- -11B

030-P-15A
030-T-11A

030-P-16B
030-P-16A
030-FB-01

030 T 12

030 T 10

030-P 05A/B

PAPPING
AREA

-S-04

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.07- Electrical Cables Termination Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.08- FAT Reports & Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.09- SAT Reports & Certificates

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.10- Electrical Pre-Commissioning Check Lists

Enppi

PRE-COMMISSIONING CHECK LIST
LIGHTNING PROTECTION SYSTEM
EL-37 A

PROJECT TITLE	: EGPC Crude Oil Tank Farms Project, Agrood Area 30 (Module-01)		
PROJECT NUMBER	: 1251-100	**DISCIPLINE**	: Electrical
SYSTEM NAME	: Plant Area Lightning Protection System	**SYSTEM ID**	: 030-EL-015
SUB-SYSTEM NAME	: Plant Area Lightning Protection System	**SUB-SYSTEM ID**	: 030-EL-015
ITEM TAG No.	: Lightning	**AREA**	: 30
REF. DWGs/DOCs	:		

No.	DESCRIPTION	RESULT OK/NA/PL	PL ITEM No.
1	Construction punch list to be checked.	✓	
2	Check lightning system components according to the approved documents.	✓	
3	Check lightning components installation w.r.t approved drawings.	✓	
4	Check lightning components cables termination & connection.	✓	
5	Check and ensure that all contacts are clean and greased.	✓	
6	Check the down conductor size & fixation against the data sheet / drawing.	✓	
7	Check bending radius of the lightning conductors.	✓	
8	Check the connection with plant grounding system.	✓	
9	Inspect earthing cable lugs.	✓	
10	Perform ground resistance test for the whole grounding system after assembly.	✓	
11	Contractor marked up drawings is available.	✓	

REMARKS AND OBSERVATIONS :

OK: NO OBJECTION, NA: NOT APPLICABLE, PL: PUNCH LIST.

COMPANY	CONST. CONTRACTOR	ENPPI	CUSTOMER
NAME			
SIGNATURE			
DATE			

10000-Z-000-EK7-TMP-0013 (03/14)

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

12.11- Electrical Supplier Check Lists & Reports

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

13- Electrical Commissioning

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

13.01- Electrical -Commissioning Check Lists

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

13.02- Electrical Supplier Check Lists & Reports

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

14- Red Marked-up Drawings

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

14.01- P&ID

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

14.02- Instrumentation Drawings

System ID	030-EL-015
System Description	Plant Area Lightning Protection System

14.03- Electrical Drawings